DOOSAN Document Transmittal Upper Trishuli-1 HEP (216MW)		Date 2022-08-12	DT No.: UT1-HEP-DHI-PC-D-0057	SHEET 1 OF 1
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SUBJECT	Review Note RN-0215_Layout DWG of Desander Basin			

S. N.	REVIEW NOTE NO.	REVIEW STATUS	DWG. / DOC. NO.	REV.	DWG. TITLE / DOC. DESCRIPTION	REMARK
1	RN-0215	AN	UT1-C-030-CVL-DG-52001	0B	Layout DWG of Desander Basin	9 SHEET
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

Received by :

Date :

Legend of Review Status
A : APPROVED
AN : APPROVED AS NOTED
RR : RETURN FOR RESUBMISSION
FI : FOR INFORMATION

DHI STAMP

Doosan Enerbility Co., Ltd
DOOSAN Enerbility
Branch Office Nepal

Issued by DHI

Youngsoo Son

Project Manager

Email: youngsoo.son@doosan.com
Doosan Enerbility Co., Ltd.

Discipline : Civil

UPPER TRISHULI-1 HEP (216MW)

Client	**Nepal Water and Energy Development Company Private Limited**
Owner's Engineer	**Joint Venture of Tractebel Engineering GmbH & Jade Consult**

REVIEW NOTE

Contractor	**Doosan Enerbility**		
Title of the Document	Layout Drawing of Desander Basin		
Document/Drawing No.	UT1-C-030-CVL-DG-52001	Revision	0B
Date of Documents/Drawings	28.07.2022	Received Date	01.08.2022
Transmittal Form No.	UT1-HEP-DHI-D-0329		
Previous Review Date/Status	20.10.2021/RR	Prev. Review Note No.	RN-0019
Review Note No.	**RN-0215**	**Present Review Date**	**12.08.2022**
		Present Review Status	**AN**

A: Approved AN: Approved as Noted RR: Returned for Resubmission FI: For Information, only

Comments

Comments are indicated in red in the annexes 1 to 6.

DISCLAIMER

Any approval will not release the Contractor from any of his obligations under the Contract. Despite the Engineer's approval the Contractor remains fully responsible for design, calculation, dimensioning, supply and installation without limitations.

Sebastian Beck, Chief Design Engineer

RN-0215, ANNEX 1.a
12/08/2022 Y.K. - B.S

RN-0215, ANNEX 1.b
12/08/2022 Y.K. - B.S

PLAN LAYOUT OF DESANDER BASIN

1:400

- HYDROMECHANICAL EQUIPMENT, TRANSPORTATION AND INSTALLATION NEEDS TO BE CONFIRMED BY THE RESPECTIVE SUPPLIER AS WELL AS ALL OTHER NECESSARY E&M EQUIPMENT
- FINAL APPROVAL IS SUBJECT TO RESULTS OF OUTSTANDING NUMMERICAL ANALYSIS (BESIDE OTHERS)
- ACCESSTUNNELS FOR U/S AND D/S DESANDER GATE CHAMBERS, FLUSHING TUNNEL, CONNECTING TUNNEL ARE SUBJECT TO SEPARATE REVIEW NOTES
- AZIMUTH OF AXIS NOT INDICATED
- ALL STRUCTURS WITH THEIR DIMENSIONS AND AXIS SHALL BE PRECISELY MATCHED BETWEEN ALL CORRESPONDING ACCOMPANING DESIGN DOCUMENTS (→ DRAWINGS, STRUCTURAL ANALYSIS, REPORTS, METHOD STATEMENTS, ETC.)
- LOCAL GRID SHALL BE DEFINED AND INDICATED IN ALL DESIGN DRAWINGS
- COMMENTS ARE VALID FOR ALL 6SHEETS OF THE DRAWING UNDER THIS REVISION

- AS THE DRAWING UNDER THIS REVISION IS A GENERAL LAYOUT DRAWING, ONLY COMMENTS REGARDING GENERAL ARRANGEMENT ARE GIVEN
- DIMENSIONS REGARDING CONCRETE LINING AND OTHER STRUCTURAL CONCRETE ARE SUBJECT TO THE RESPECTIVE STRUCTURAL ANALYSIS; SAME APPLIES TO INDICATED ROCK SUPPORT
- NO REPLY COMMENT TO RN-0013, OE-TJ-UT1-OUT-12, 20.10.2021 (RR); ALSO REFER TO OE-TJ-UT1-OUT-SITE-DH1-261 18.07.2022
- DESCRIPTION OF GENERAL OPERATION PROCEDURES OF DESANDER?

SUBJECT TO FINAL APPROVAL OF NUMERICAL ANALYSIS

AZ = ???

R?

NOT BIFURCATION BUT TRIFURCATION

SEE COMMENT SHEET 2 OF 6

DIMENSION LINE OUT OF STRUCTURE

LINETYPE "AXIS"

REDUCTION OF WIDTH TO BE INDICATED IN GEN. PROF. (SHEET 2/6)

LOCATION OF GATEROOM NOT THE SAME AS FL-T-LAYO

Diversion wall
Bifurcation of U/S connecting tunnel
U/S connecting tunnel 1#
U/S connecting tunnel 2#
U/S connecting tunnel 3#
U/S gate operating house 1#
U/S gate operating house 2#
U/S gate operating house 3#
Access tunnel for U/S gate operating house See note 5
Access tunnel for D/S gate operating house of desander basin, See note 3
Desander basin-1
Desander basin-2
Desander basin-3
To be determined
Contr.lt@8.2m
D/S gate operating house 1#
D/S gate operating house 2#
D/S gate operating house 3#
D/S gate operating house
Intake tunnel
U/S Connecting tunnel
Diffusion section
Working section
FLOW
1:1.1543
1:100
1:7.6
N 3,112,400 E 627,300
N 3,112,600 E 627,300
N 3,112,500 E 627,200

RN-0215, ANNEX 1.b
12/12/2022 YR - RZ

OF DESANDER BASIN

1:400

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- NO REPLY COMMENT TO RN-0013, OE-TJ-UT1-OUT-12, 20.10.2021 (RR); ALSO REFER TO OE-TJ-UT1-OUTSite-DHI-261 18.07.2022
- DESCRIPTION OF GENERAL OPERATION PROCEDURES

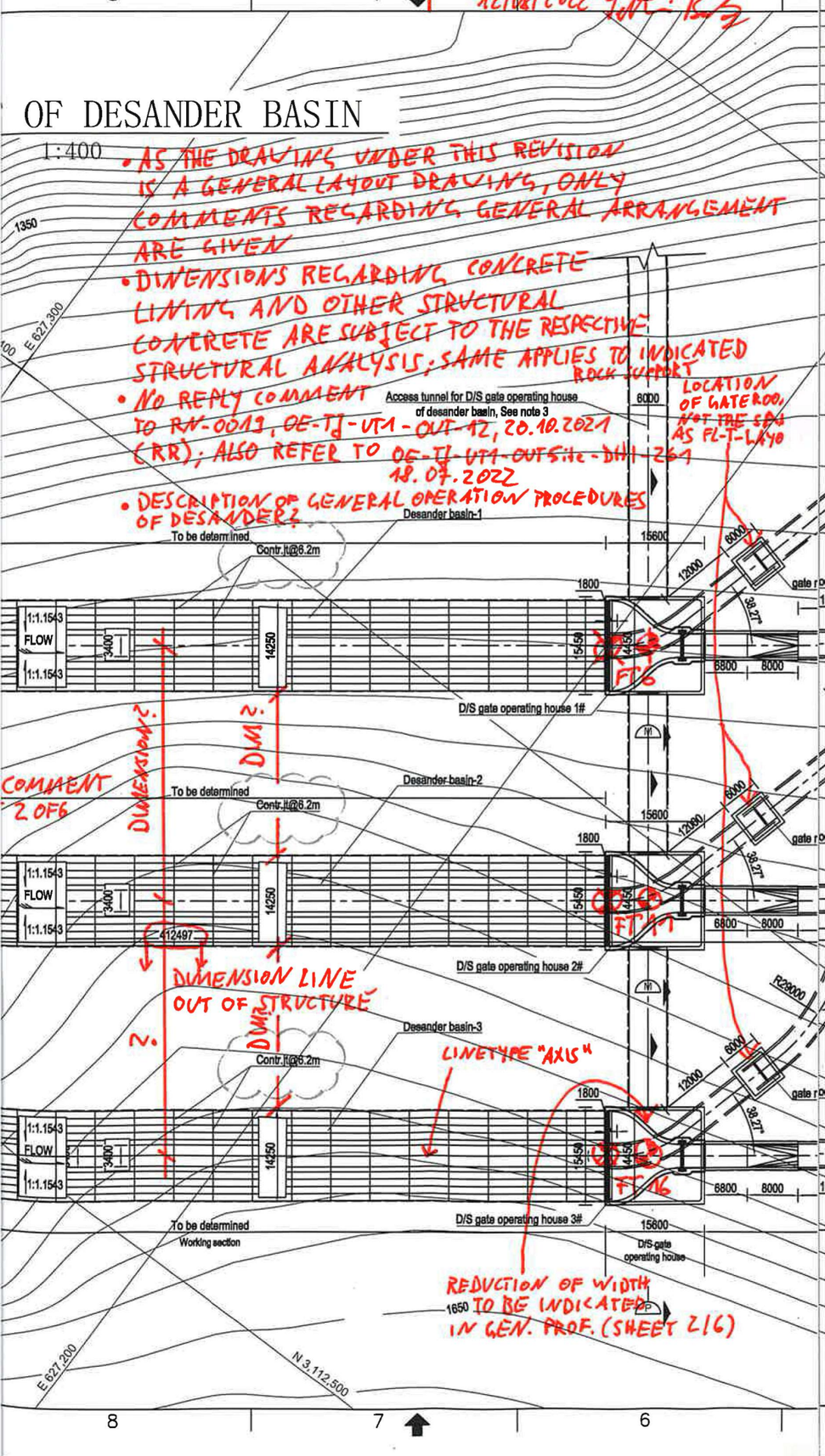
LOCATION OF GATE ROOM, NOT THE SAME AS PL-T-LAY0

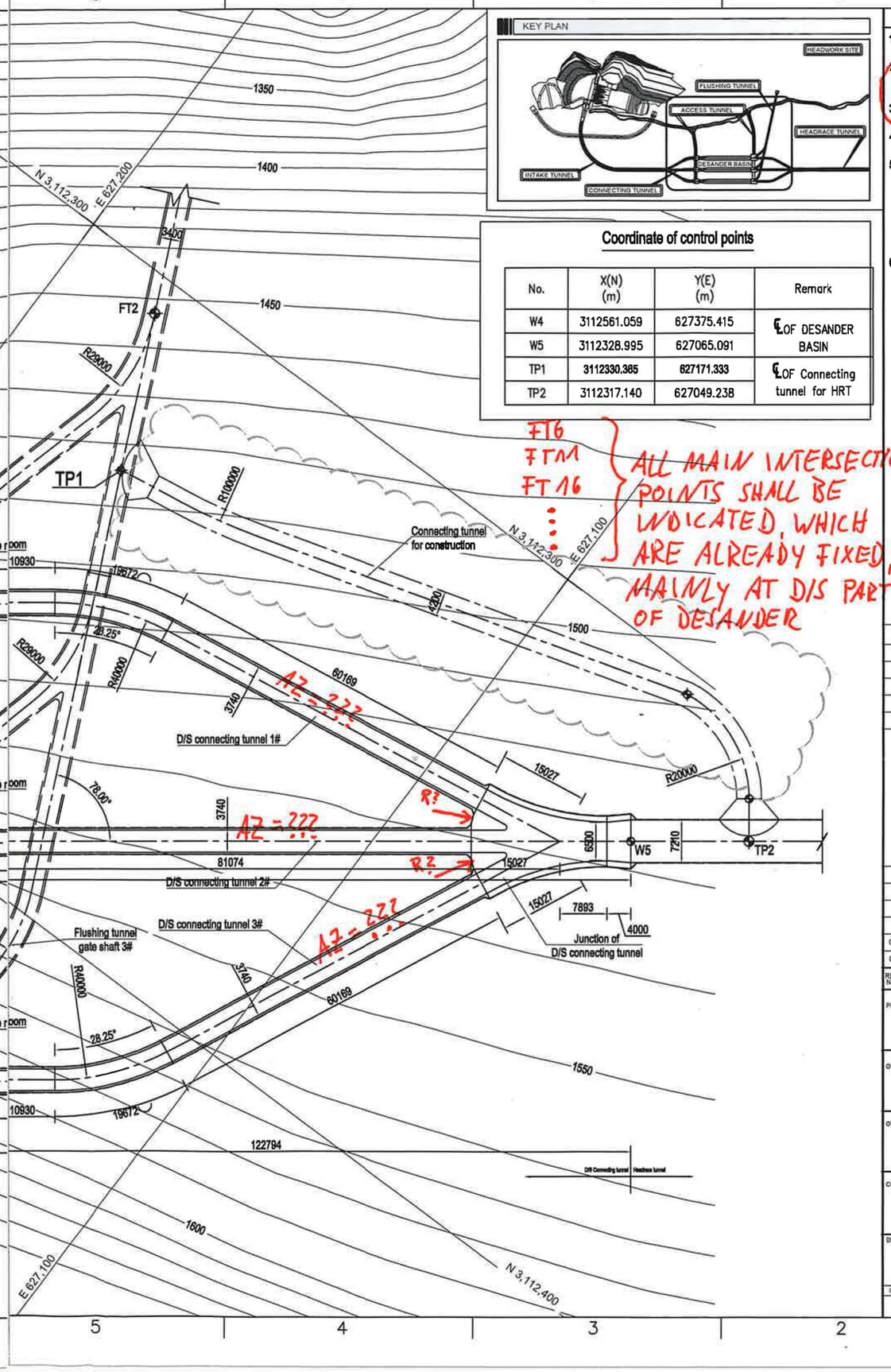
COMMENT 2 OF 6

DIMENSION LINE OUT OF STRUCTURE

LINETYPE "AXIS"

REDUCTION OF WIDTH TO BE INDICATED IN GEN. PROF. (SHEET 2/6)





Coordinate of control points

No.	X(N) (m)	Y(E) (m)	Remark
W4	3112561.059	627375.415	℄OF DESANDER BASIN
W5	3112328.995	627065.091	
TP1	3112330.365	627171.333	℄OF Connecting tunnel for HRT
TP2	3112317.140	627049.238	

FT6
FT11
FT16
...

ALL MAIN INTERSECTION POINTS SHALL BE INDICATED, WHICH ARE ALREADY FIXED, MAINLY AT D/S PART OF DESANDER

NOTE

1. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
2. Pls. see drawing No. UT1-C-030-CVL-DG-51001 for layout drawing of access tunnel for D/S gate operating house of desander basin.
3. Pls. see drawing No. UT1-C-030-CVL-DG-53001 for layout drawing of flushing tunnel.
4. Layout drawing of access tunnel for U/S gate operating house of desander basin shall be shown in subsequent drawings.
5. Symbol description:
   - 5.1. A-line is the design excavation line.
   - 5.2. B-line is the overbreak line.
   - 5.3. R denotes round bar, yield strength of the round bar is 280mMpa.
   - 5.4. D denotes deformed bar, yield strength of the deformed bar is 500Mpa;
6. The specified compressive strength of concrete is the cylinder strength of concrete at age of 28 days.

Legend:

- Excavation line
- Estimated ground water level
- surface of 1st concrete
- section of 1st concrete

Scale: 1:400 0 4 8 12 16 20m

REFERENCE DRAWINGS

SYMBOL AND LEGEND

FOR APPROVAL

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0A	28.JUL., 2021	FIRST ISSUE	WANG H.Q.	K.J. KIM	Y.S. SON

PROJECT TITLE
Upper Trishuli-1 HEP (216MW)

OWNER
NWEDC

OWNER'S ENGINEER
TRACTEBEL ENGIE
jade CONSULT

CONTRACTOR
DOOSAN Enerbility

DRAWING TITLE
LAYOUT DRAWING OF DESANDER BASIN

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-52001	1 OF 6	0B

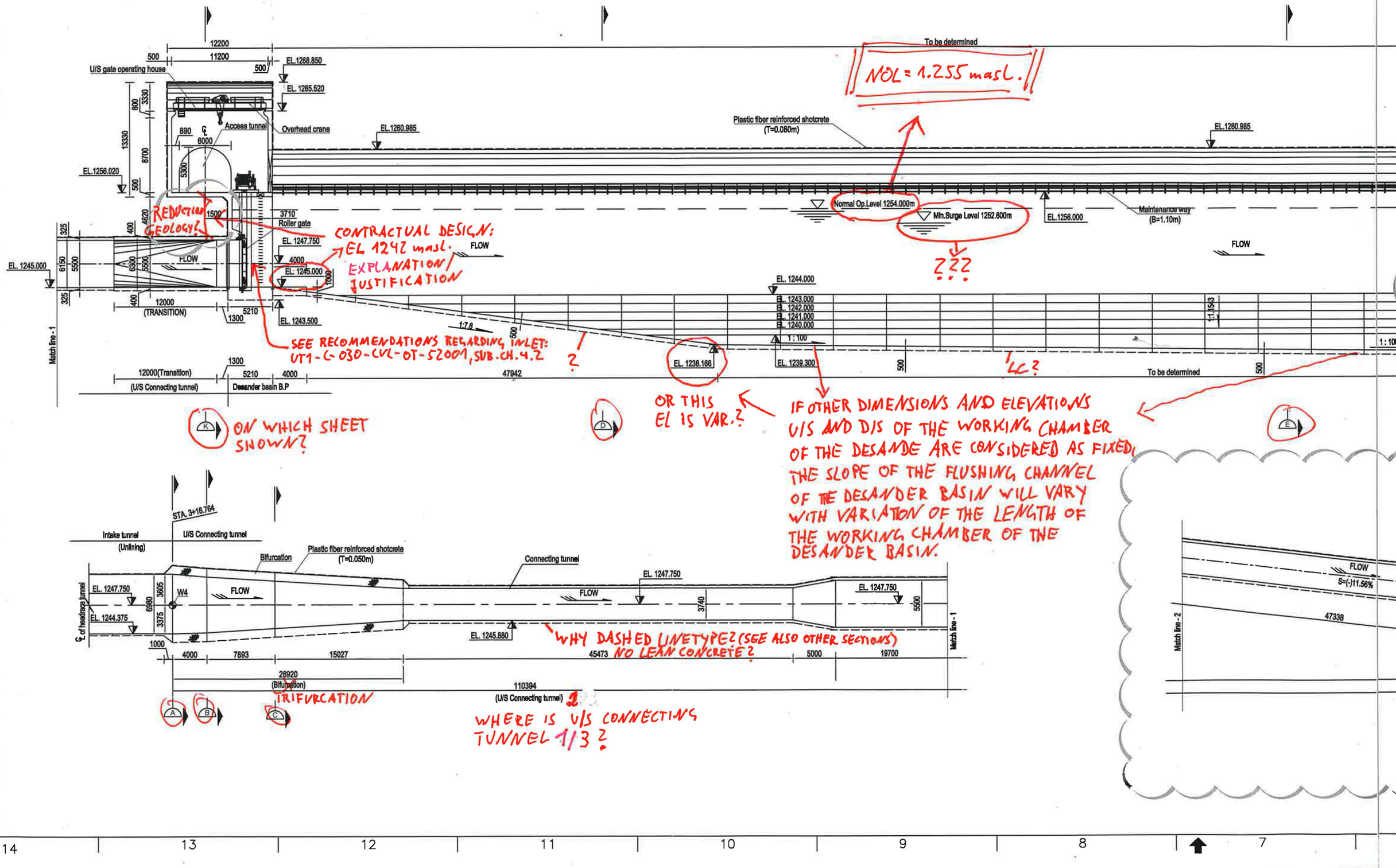
(594 x 1365.93 MM)

RN-0215, ANNEX 2.a
12/08/2022
Left: Bk

RN-0215, ANNEX 2.b
12/08/2022
Left: Bk

GENERAL PROFILE OF DESANDER BASIN

1:200



RV-0215, ANNEX-2.6
12/08/2022

BASIN

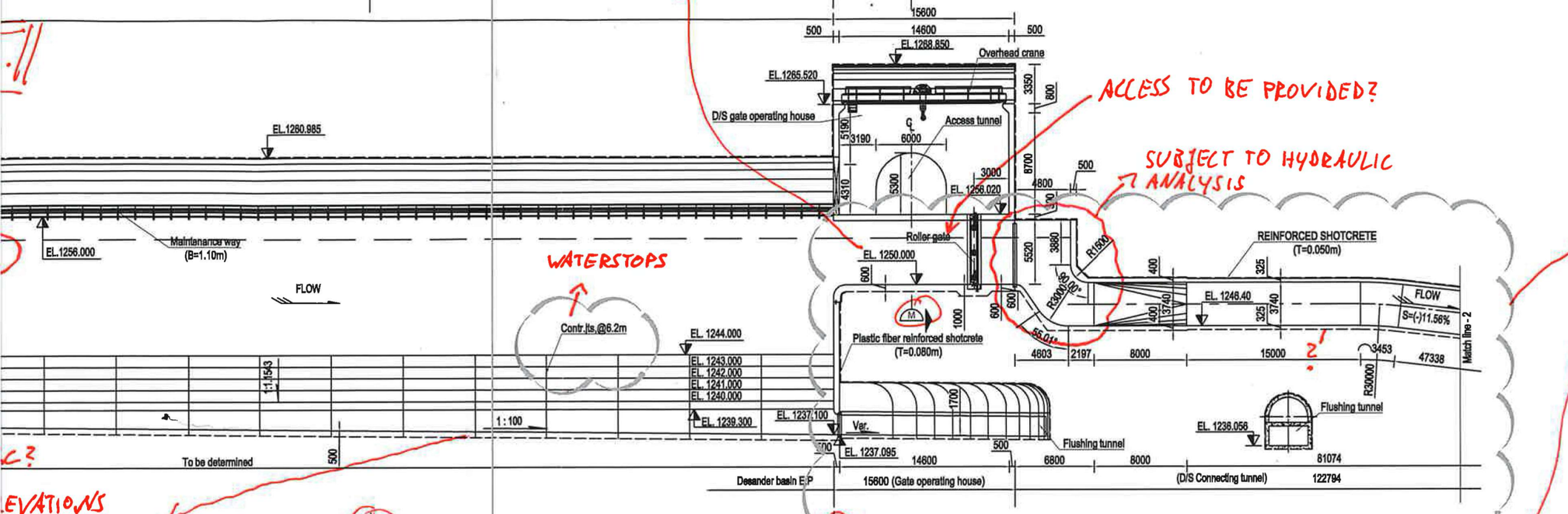
REDUCTION OF WIDTH AS SHOWN IN PLAN LAYOUT (SHEET 1/6) SHALL BE INDICATED

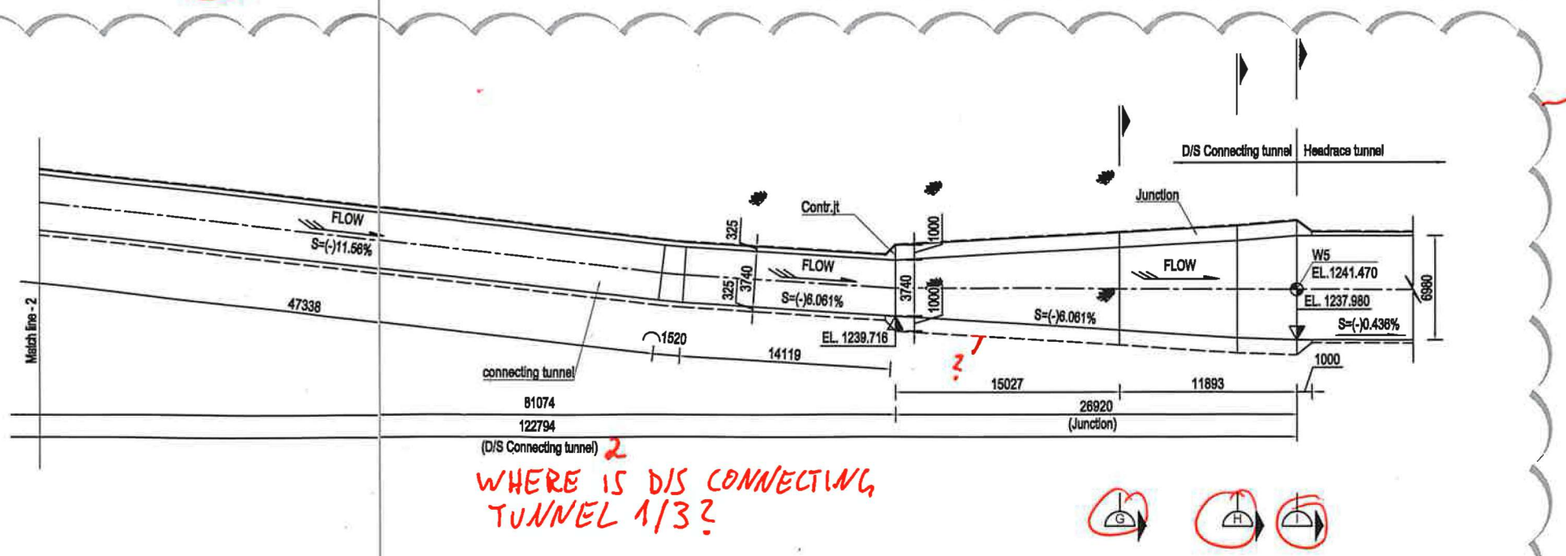
ACCESS TO BE PROVIDED?

SUBJECT TO HYDRAULIC ANALYSIS

WATERSTOPS

REVISIONCLOUD INDICATES WHAT? CHANGE FROM REV04 TO REV05?





WHERE IS D/S CONNECTING TUNNEL 1/3?

EVATIONS
NG CHAMBER
DERED AS FIXED
CHANNEL
ILL VARY
NGTH OF
F THE

NOTE

1. This set of drawings is general plan layout of desander basin, access tunnel and flushing tunnel.
2. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
3. Pls. see sheet 1 for other notes.

Scale:
1:200 0 2 4 6 8 10m

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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NWEDC

OWNER'S ENGINEER
TRACTEBEL ENGIE
fade CONSULT

CONTRACTOR
DOOSAN Enerbility

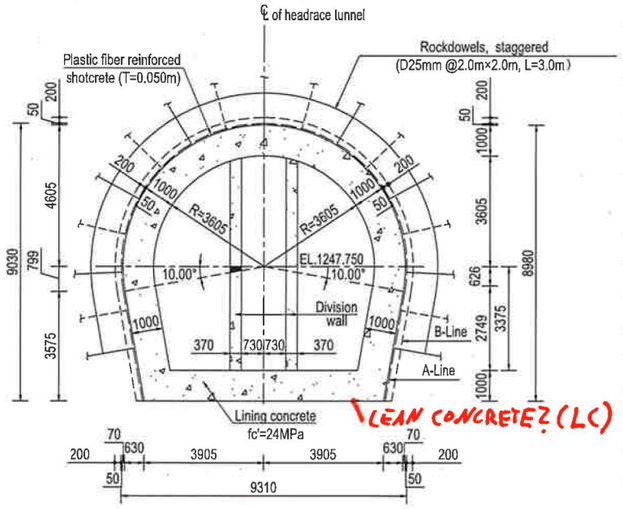
DRAWING TITLE
LAYOUT DRAWING OF DESANDER BASIN

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-52001	2 OF 6	0B

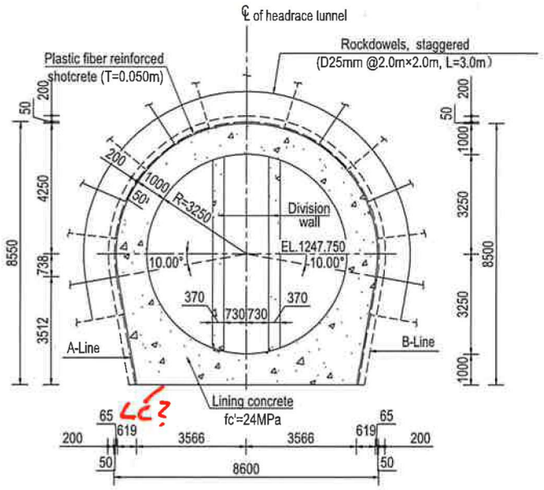
(594 x 1471.5 MM)

RN-0215, ANNEX 3
12/08/2022

SECTION A-A
1:100



SECTION B-B
1:100



SECTION C-C
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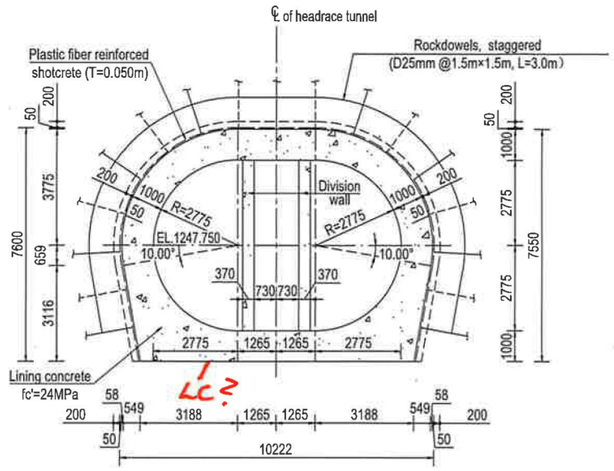
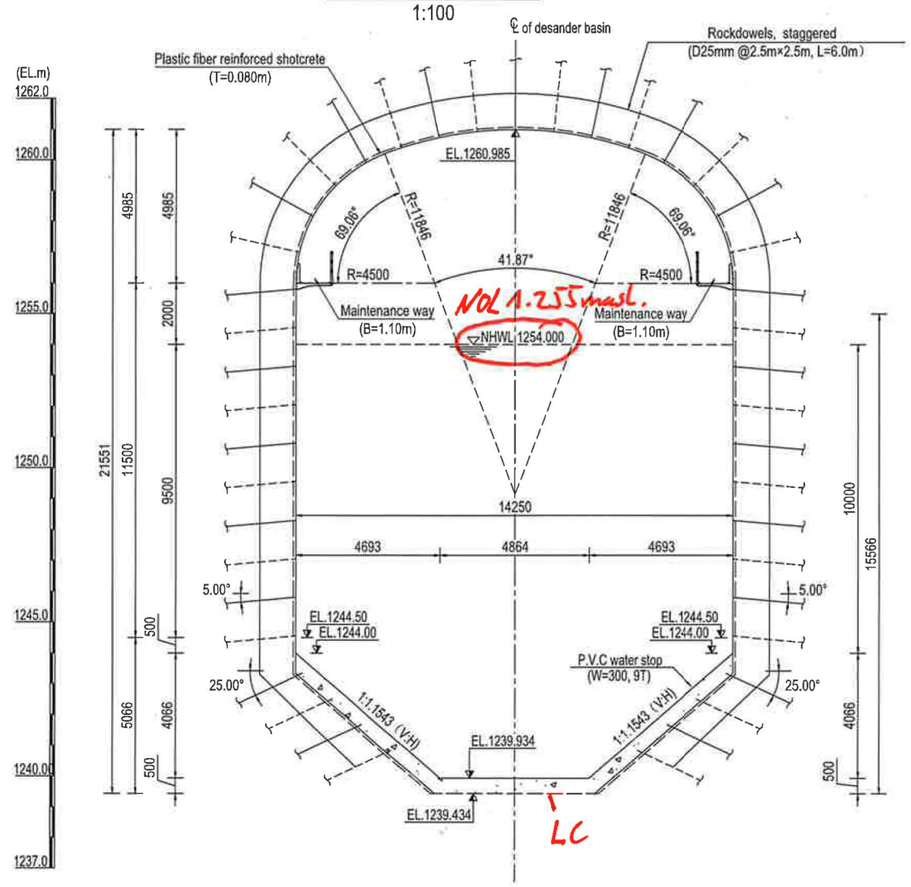
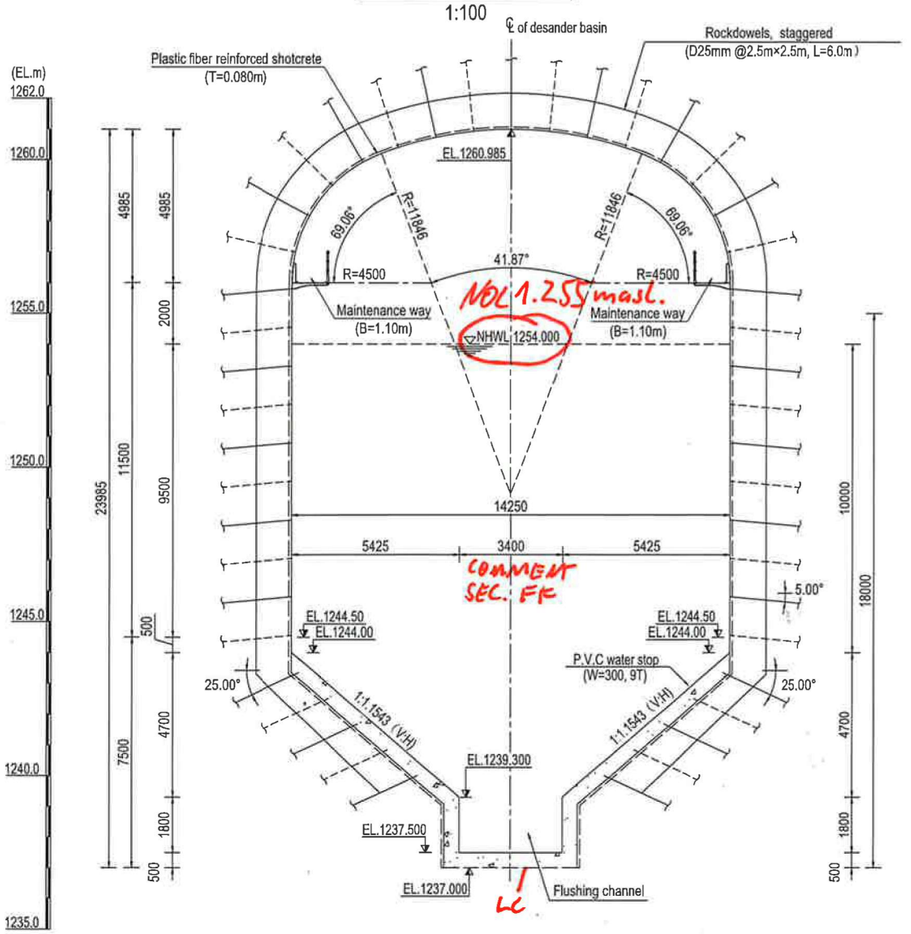


SECTION D-D
1:100



SECTION E-E
1:100



NOTE

1. This set of drawings is general plan layout of desander basin, access tunnel and flushing tunnel.
2. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
3. Pls. see sheet 1 for other notes.

Legend:

- Excavation line
- Estimated ground water level
- surface of 1st concrete
- section of 1st concrete

Scale: 1:100 (0 1 2 3 4 5m)

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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DRAWING TITLE
LAYOUT DRAWING OF DESANDER BASIN

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-52001	3 OF 6	0B

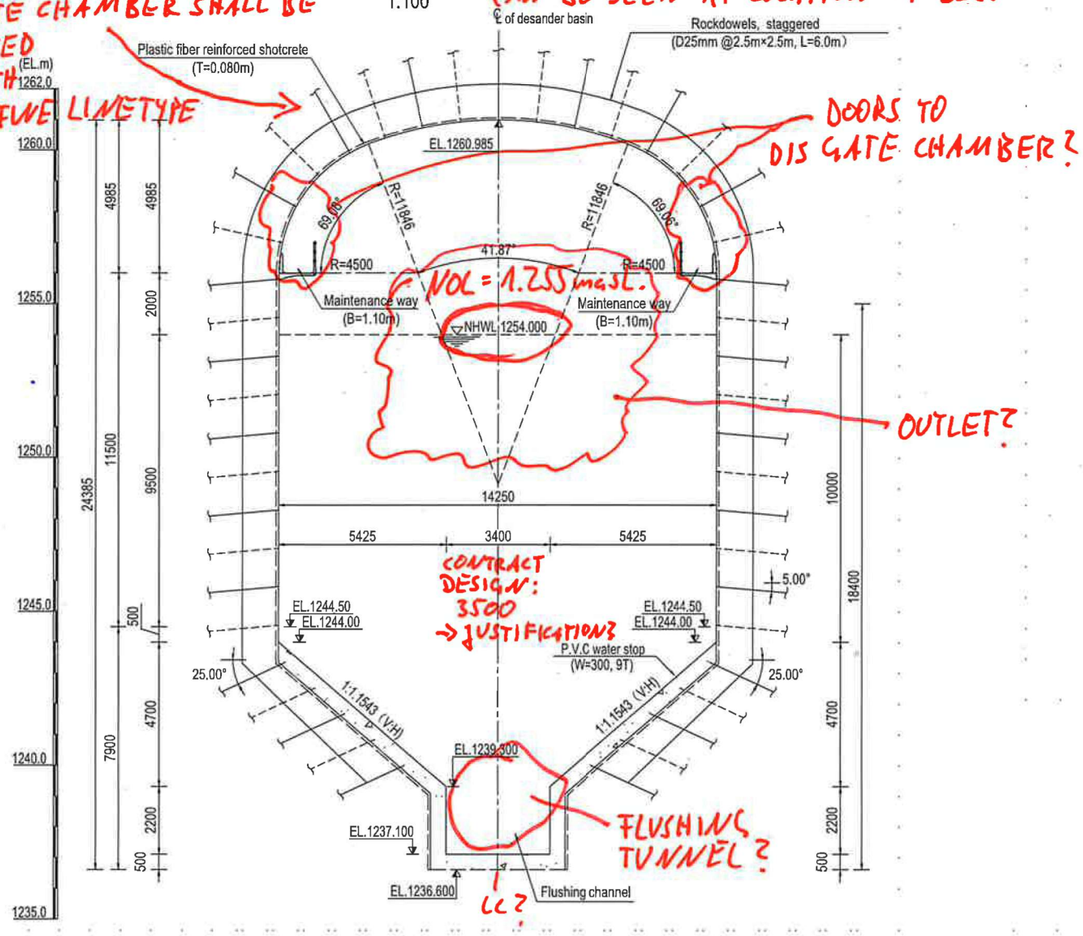
A1 (594 x 841 MM)

RN-0215, ANNEX 4
12/08/2022

OUTLINE OF HIDDEN DIS GATE CHAMBER SHALL BE INDICATED E.G. WITH DASHED FINE LINETYPE

SECTION F-F
1:100

NOT INDICATED AS CAN BE SEEN AT LOCATION OF SEC. F-F



DOORS TO DIS GATE CHAMBER?

NOL = 1.255 mast.

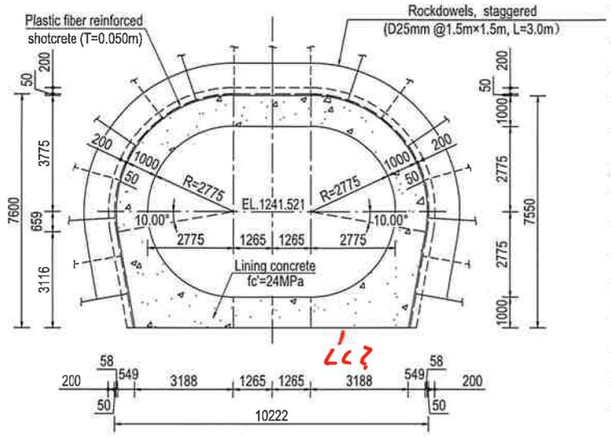
OUTLET?

CONTRACT DESIGN: 3500 → JUSTIFICATION?

FLUSHING TUNNEL?

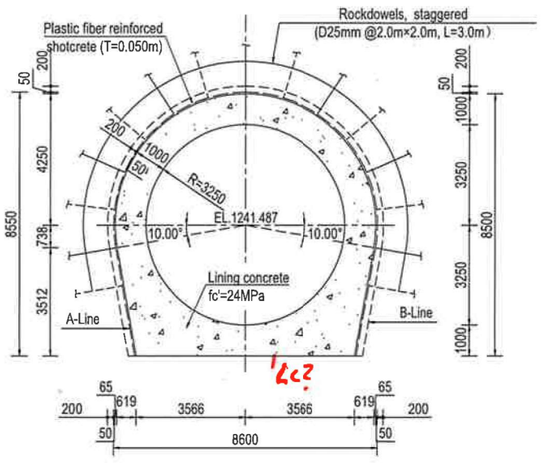
LC?

SECTION G-G
1:100



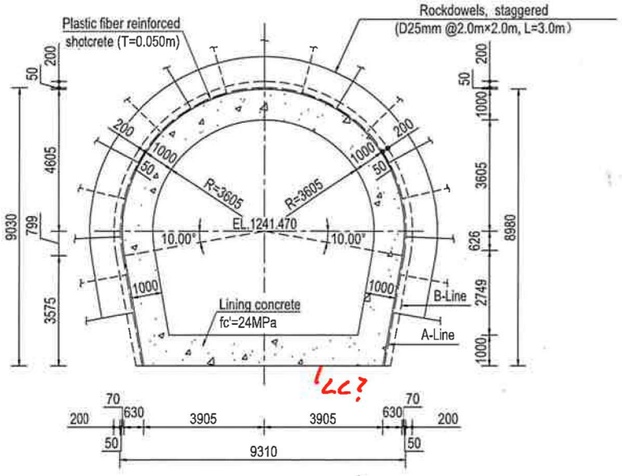
LC?

SECTION H-H
1:100



LC?

SECTION J-J
1:100



LC?

NOTE

1. This set of drawings is general plan layout of desander basin, access tunnel and flushing tunnel.
2. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
3. Pls. see drawing No. UT1-C-030-CVL-DG-51002 for Excavation and support of Access tunnel for D/S gate operating house of desander basin.
4. Pls. see sheet 1 for other notes.

Legend:

- Excavation line
- Estimated ground water level
- surface of 1st concrete
- section of 1st concrete

Scale:

1:100 0 1 2 3 4 5m

1:50 0 0.5 1 1.5 2 2.5m

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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DOOSAN Enerbility

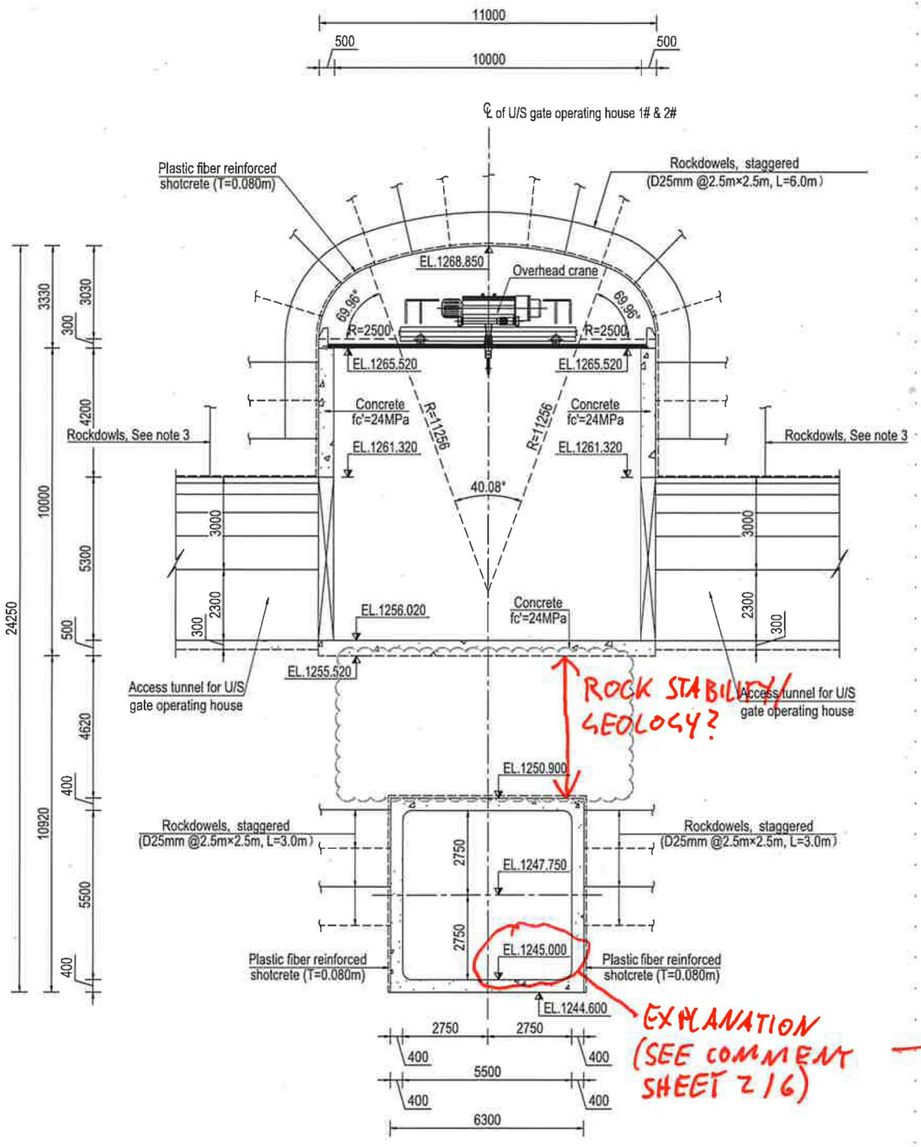
DRAWING TITLE
LAYOUT DRAWING OF DESANDER BASIN

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-52001	4 OF 6	0B

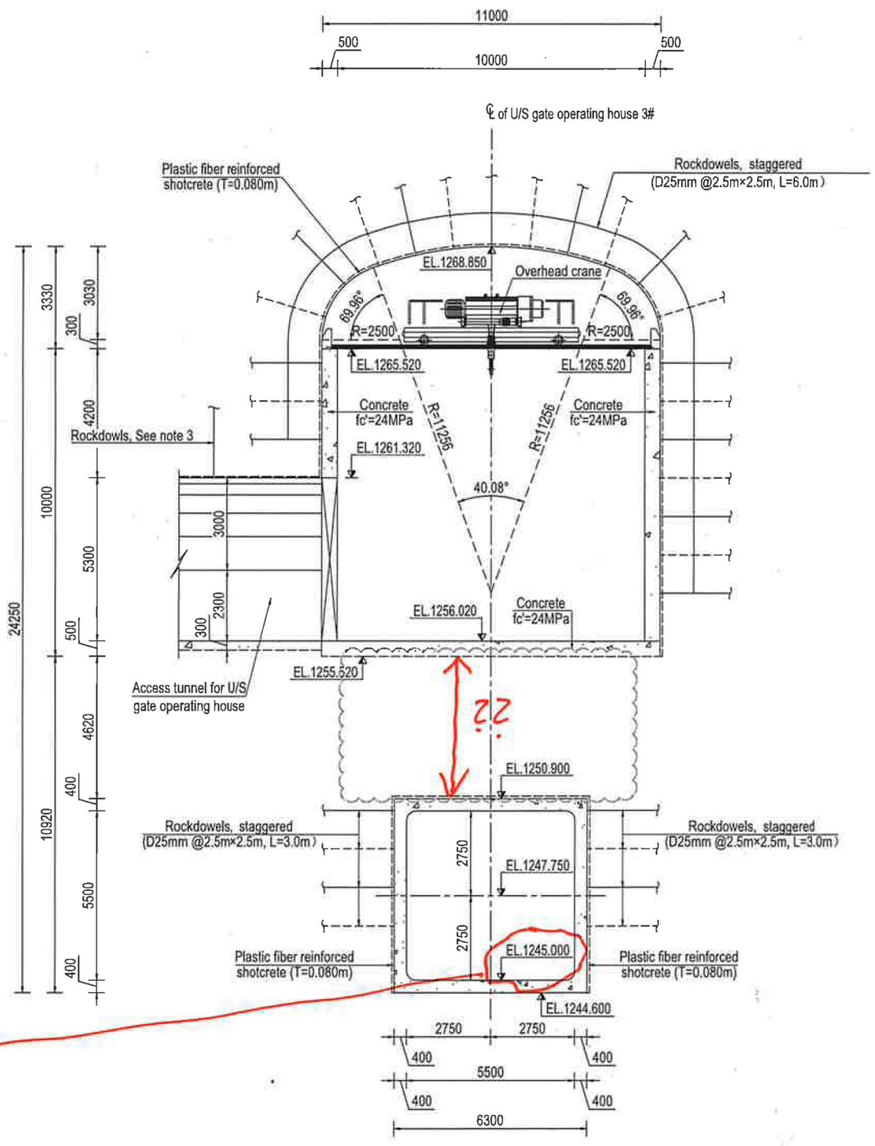
A1 (594 x 841 MM)

RN- 0215, ANNEX 5
12/08/2022 YM BE

SECTION K-K
1:100



SECTION L-L
1:100



NOTE

1. This set of drawings is general plan layout of desander basin, access tunnel and flushing tunnel.
2. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
3. Excavation and support of Access tunnel for U/S gate operating house of desander basin shall be shown in subsequent drawings.
4. Pls. see sheet 1 for other notes.

Legend:

- Excavation line
- Estimated ground water level
- surface of 1st concrete
- section of 1st concrete

Scale:

1:100 0 1 2 3 4 5m

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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NWEDC

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TRACTEBEL ENGIE
iade CONSULT

CONTRACTOR
DOOSAN Enerbility

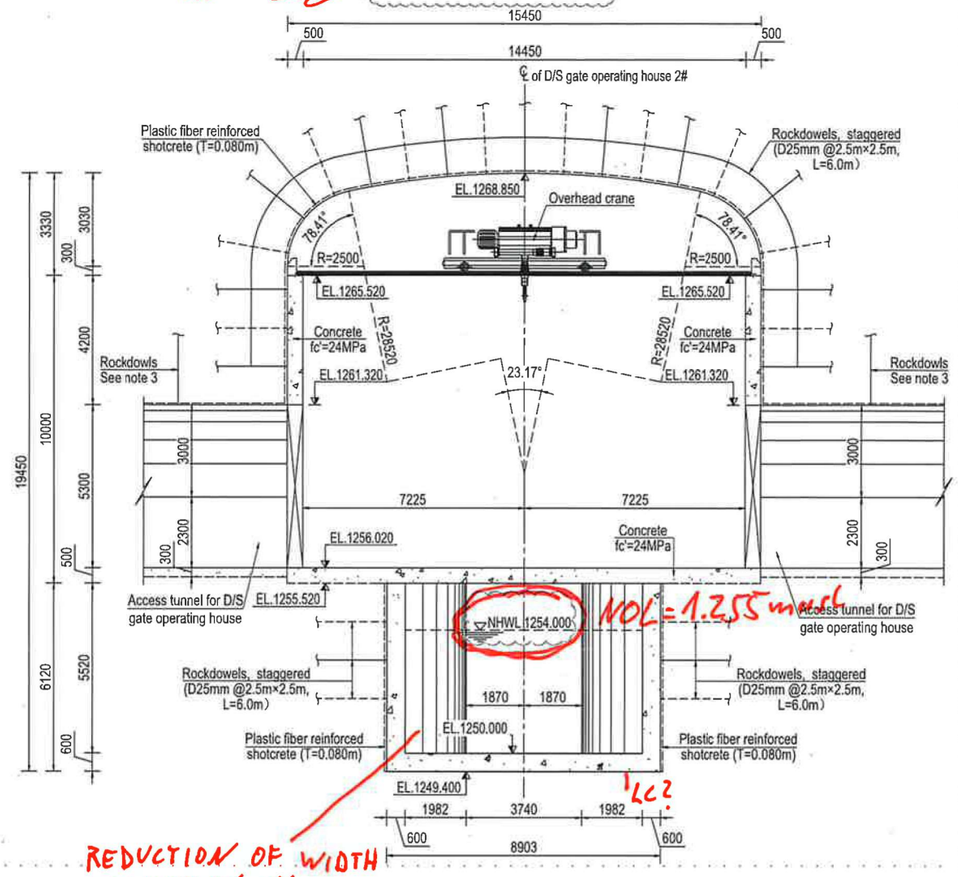
DRAWING TITLE
LAYOUT DRAWING OF DESANDER BASIN

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-52001	5 OF 6	0B

A1 (594 × 841 MM)

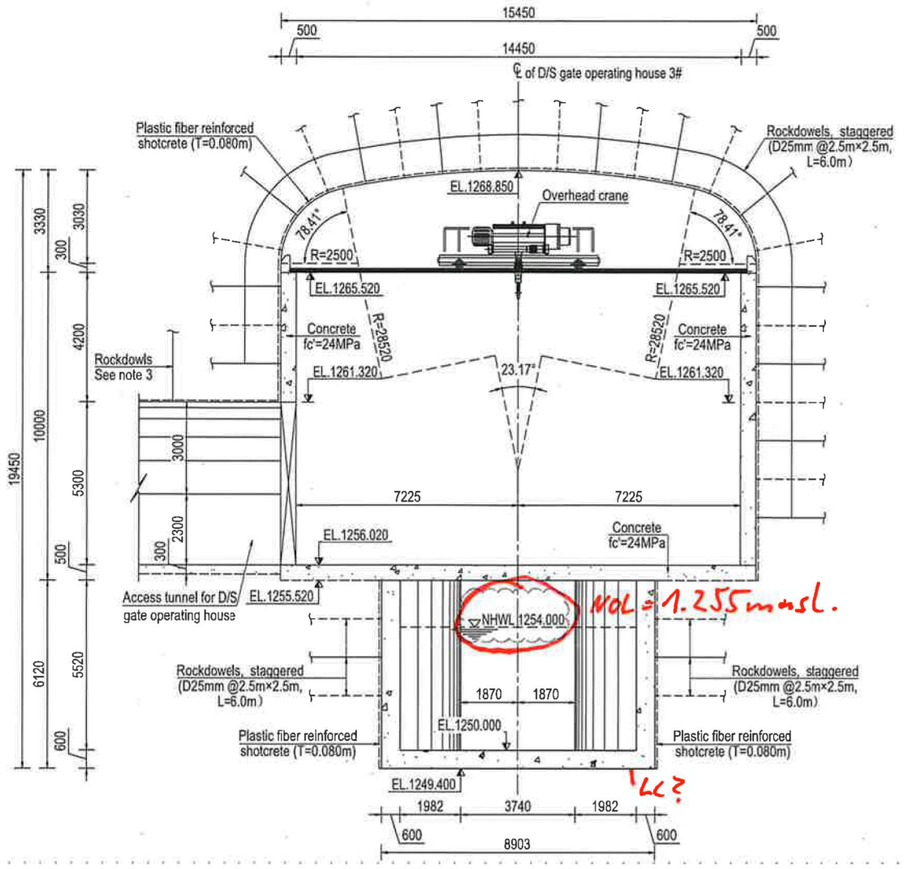
RN-0215, ANNEX 6
12/08/2022 Yulti Bek

SECTION M-M
1:100

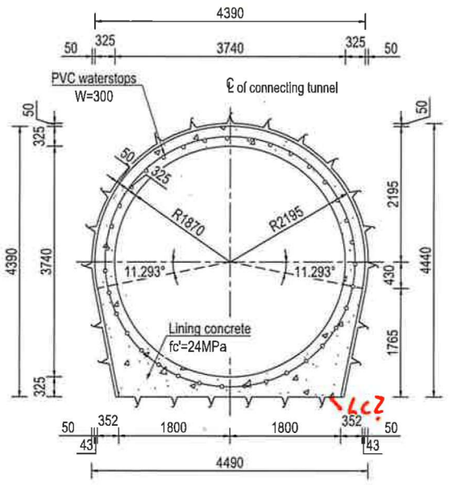


REDUCTION OF WIDTH NOT SHOWN IN GENERAL PROFILE (SHEET 2/6)

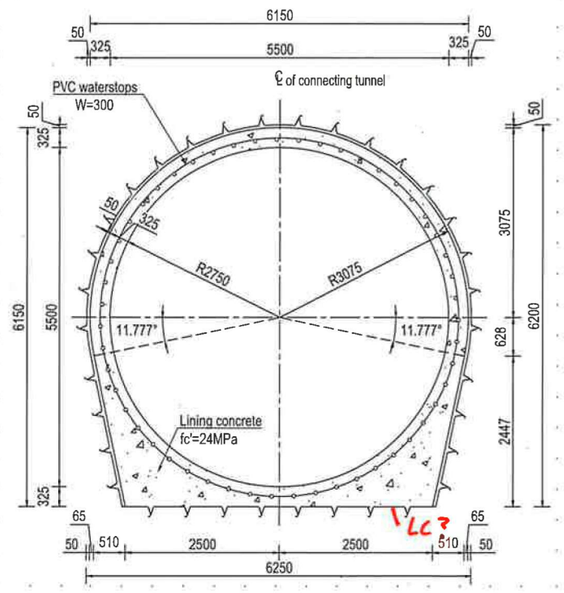
SECTION P-P
1:100



TYPICAL SECTION 1 FOR CONNECTING TUNNEL
1:50



TYPICAL SECTION 2 FOR CONNECTING TUNNEL
1:50



NOTE

1. This set of drawings is general plan layout of desander basin, access tunnel and flushing tunnel.
2. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
3. Pls. see drawing No. UT1-C-030-CVL-DG-51002 for Excavation and support of Access tunnel for D/S gate operating house of desander basin.
4. Pls. see sheet 1 for other notes.

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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0B	28.JUL., 2022	SECOND ISSUE	WANG H.Q.	K.J. KIM	Y.S. SON
0A	28.JUL., 2021	FIRST ISSUE	WANG H.Q.	K.J. KIM	Y.S. SON

PROJECT TITLE
Upper Trishuli-1 HEP (216MW)

OWNER
NWEDC

OWNER'S ENGINEER
TRACTEBEL ENGIE
fichtner CONSULT

CONTRACTOR
DOOSAN Enerbility

DRAWING TITLE
LAYOUT DRAWING OF DESANDER BASIN

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-52001	6 OF 6	0B

A1 (594 x 841 MM)